

LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

Volume 5 | Technical Appendices

CFA19 | Coleshill Junction

Construction assessment (SV-003-019)

Sound, noise and vibration

November 2013

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Department
for Transport

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High Speed Two (HS2) Limited,
Eland House,
Bressenden Place,
London SW1E 5DU

Details of how to obtain further copies are available from HS2 Ltd.

Telephone: 020 7944 4908

General email enquiries: HS2enquiries@hs2.org.uk

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Appendix SV-003-019

Environmental topic:	Sound, noise and vibration	SV
Appendix name:	Construction assessment	003
Community forum area:	Coleshill Junction	019

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1 Introduction

- 1.1.1 The sound, noise and vibration appendices comprise four sections. The first of these is an introduction to the relevant route-wide methodology, assumptions and assessment (Volume 5: Appendix SV-100-000). This relates to the sound, noise and vibration assessment for all community forum areas (CFA).
- 1.1.2 For the Coleshill Junction community forum area (CFA19), the other three sections are as follows:
- baseline sound, noise and vibration (Appendix SV-002-019);
 - construction sound, noise and vibration (Appendix SV-003-019) (this appendix); and
 - operational sound, noise and vibration (Appendix SV-004-019).
- 1.1.3 The outcomes of the assessment are summarised in Volume 2: CFA19 Report, Section 11 Sound, noise and vibration.
- 1.1.4 Maps referred to throughout the sound, noise and vibration appendices are contained in the Volume 5 map book.
- 1.1.5 This appendix presents the likely noise and vibration impacts, effects and significant effects arising from the construction of the Proposed Scheme for the Coleshill Junction area on:
- people, primarily where they live ('residential receptors') in terms a) individual dwellings and b) on a wider community basis, including any shared community open areas; and
 - community facilities such as schools, hospitals, places of worship, and also commercial properties such as offices and hotels, collectively described as 'non-residential receptors' and 'quiet areas'.
- 1.1.6 The assessment of likely impacts, effects and significant effects from construction noise and vibration on agricultural, community, ecological or heritage receptors and the assessment of tranquillity are presented in the following documents within Volume 5:
- | | |
|-----------------------------------|---------------------|
| • Agriculture, forestry and soils | Appendix AG-001-019 |
| • Community | Appendix CM-001-019 |
| • Ecology | Appendix EC-005-019 |
| • Heritage | Appendix CH-003-019 |
| • Landscape and Visual | Appendix LV-001-019 |

1.2 Evaluation of impacts and effects

- 1.2.1 This appendix provides a quantitative assessment of construction noise and vibration impacts/effects and a qualitative assessment of likely significant effects, based on the

impacts/effects identified and other local context information consistent with the scope and methodology defined for the Proposed Scheme.

- 1.2.2 Indirect effects arising from temporary changes in traffic patterns on the existing road network as a consequence of constructing the Proposed Scheme are also reported in this appendix, where they would occur within the study area as defined in Volume 5: Appendix SV-001-000.
- 1.2.3 In undertaking the assessment of sound and vibration, consistent with Environmental Impact Assessment (EIA) Regulations and emerging National Planning Practice Guidance¹, a differentiation between impacts effects, adverse effects and significant effects is made. Further information is provided in Volume 5: Appendix SV001-000.
- 1.2.4 The assessment of impacts and effects has been undertaken at assessment locations that are representative of a number of dwellings or other sensitive receptors. The Assessment Locations employed in this assessment are presented on map series Sv-03 in the CFA19 Volume 5 sound, noise and vibration map book.

¹ Information is provided in the emerging National Planning Practice Guidance – Noise <http://planningguidance.planningportal.gov.uk>, refer to the noise exposure hierarchy.

2 Scope, assumptions and limitations

2.1 Regional and local policy guidance

2.1.1 The policy framework for sound, noise and vibration is set out in Volume 1 and in Volume 5: Appendix SV-001-000. As part of the engagement with local authorities through the Planning Forum Sub Group – Acoustics, information regarding any specific local planning guidance in respect of noise and vibration has been requested. Whilst no information has been received for this study area via the Planning Forum Sub Group – Acoustics, the following local policy guidance on noise and vibration has been identified:

- The Solihull Unitary Development Plan – February 2006;
- Solihull Draft Local Plan – September 2012; and
- The North Warwickshire Local Plan – July 2006.

2.1.2 This guidance has been considered as part of formulating the detailed application of the impact and significance criteria set out in Volume 5: Appendix SV-001-000.

2.2 Engagement

2.2.1 Details of engagement on a route-wide basis with the local and county authorities' Environmental Health Practitioners via the Planning Forum Sub Group – Acoustics, is set out in Volume 1.

2.2.2 Engagement with communities has been via the Community Forums, as set out in Volume 1. In respect of sound, noise and vibration the following discussions have taken place:

- general discussions in respect of local issues, including possible ways to avoid and mitigate the potential impacts of noise or vibration;
- September/October 2012; a specific presentation about sound, noise and vibration with discussion afterwards with one of the project team specialists;
- November/December 2012; specific request for the Community Forum to propose baseline sound monitoring locations;
- January/February 2013; feedback to the Community Forum on any proposed baseline monitoring locations; and
- verbal/written response to questions about sound, noise and vibration.

2.3 Methodology

2.3.1 The methodology used for the assessment of airborne sound, ground-borne sound and vibration impacts and the determination of significant effects is defined in the Scope and Methodology Report (SMR) (Volume 5: Appendix CT-001-000/1), is clarified in a number of areas by the SMR addendum (Volume 5: Appendix CT-001-000/2). Further information is contained in Volume 5: Appendix SV-001-000.

2.4 Assumptions

- 2.4.1 Route-wide assumptions are outlined in Volume 1 and are further detailed in Volume 5: Appendix SV-001-000. Local assumptions that apply to the assessment of construction sound noise and vibration within this CFA are set out in Volume 2: Report 19.

2.5 Limitations

- 2.5.1 The route-wide limitations and the approach adopted to assure that they will not impact the robust assessment of sound, noise and vibration are presented in Volume 5: Appendix SV-001-000. In this area, there are a number of locations where the land or property owners did not permit baseline sound level monitoring to be undertaken at their premises. However, sufficient information has been obtained to undertake the assessment. Further information is provided in Volume 5: Appendix SV-002-019.

3 Environmental Baseline

Existing baseline

- 3.1.1 Baseline sound level data has been collected at locations representative of the airborne sound-sensitive receptors. The existing and future baseline airborne sound levels derived from these measurements are given in Volume 5: Appendix SV-002-019. Details of the baseline data collection and the methodology are given in Volume 5: Appendix SV-001-000 and specifically for this study area in Volume 5: Appendix SV-002-019.

Future baseline

- 3.1.2 The assessment of noise from construction activities assumes a baseline year of 2017, which represents the period immediately prior to the start of the construction period. As a reasonable worst case, it has been assumed that no change in baseline sound levels will occur between the existing baseline (2012/13) and the future baseline year of 2017. The assessment of noise from construction traffic assumes a baseline year of 2021, representative of the middle of the construction period when the construction traffic flows are expected to be at their peak. Further information can be found in the Traffic and Transport assessment (Appendix TR-001-019).

4 Effects arising during construction

4.1 Introduction

4.1.1 The assessment is reported first for ground-borne sound and vibration and then for airborne sound. Under each of these headings, the results of the quantitative identification of impacts and effects are presented. This is followed by the identification of significant effects and the evidence used to support these conclusions.

4.1.2 The structure of this assessment report is:

- avoidance and mitigation measures;
- quantitative identification of impact and effects:
 - ground-borne sound and vibration:
 - residential; and
 - non-residential.
 - airborne sound:
 - residential; and
 - non-residential.
- assessment of impacts and effects:
 - residential receptors: direct effects – dwellings;
 - residential receptors: direct effects – communities;
 - residential receptors: indirect effects;
 - non-residential receptors: direct effects;
 - non-residential receptors: indirect effects; and
 - cumulative effects from the proposed scheme and other committed development.

4.2 Avoidance and mitigation measures

4.2.1 These are set out in Volume 2: Report 19.

4.3 Quantitative identification of impacts and effects

Ground-borne vibration

4.3.1 Assessment locations defined for the quantitative assessment of impacts are shown on map series SV-02 in the CFA19 Volume 5 sound, noise and vibration map book.

4.3.2 For each Assessment Location, the assessment results for residential and non-residential receptors are presented in Table 1. Explanation of the information in

Table 1 is provided in Volume 5: Appendix SV-001-000, with the following additional notes:

	Where the significant effect column is highlighted, then a significant effect is identified at the referenced community, or individual receptor.
*	Significant effect – the quantitative impact methodology has identified either: <ol style="list-style-type: none"> 1) no impact at this receptor but further information (see assessment) has identified that a significant effect is nonetheless likely; or 2) an impact at this receptor which, based upon further qualitative receptor information, (see assessment text) does not give rise to a significant effect
~	Significant effect – the forecast adverse effects are not considered to be significant on a community basis (further information on methodology is provided in Volume 5: Appendix SV-001-000)
A	Type of effect – adverse effect
S	Type of effect – significant adverse effect
NA	Type of effect – not generally an adverse effect
B	Type of effect – for non-residential receptors further detail about the type of effect is set out in the text of Volume 5: Appendix SV-001-000
V1	Type of receptor – (V1) vibration sensitive research and manufacturing, hospital, and university equipment, (V2) hotels, hospital wards and education dormitories, (V3) offices, schools and places of worship, (V4) workshops
T	Receptor design – typical
S	Receptor design – special

Appendix SV-003-019 | Effects arising during construction

Table 1: Assessment of construction induced ground-borne vibration at residential receptors

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Peak particle velocity (PPV) [mm/s] on foundation	Typical/highest monthly indoor vibration dose value (VDV) [m/s ^{1.75}]		Construction activity resulting in highest forecast vibration levels	Type of effect	Number of impacts	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
			Day 07:00-23:00	Night 23:00-07:00											
123516	Gilson Drive, Coleshill, Birmingham	0.18	0.09/0.09	-	Green Lane embankment	NA	6	R	T	-	-	-	-	-	
126717	Birmingham Road, Coleshill, Birmingham	0.33	0.16/0.16	-	Coleshill embankment no. 3	NA	3	R	T	-	-	-	-	-	
139889	Vicarage Lane, Water Orton, Birmingham	0.11	0.03/0.03	-	Marsh Lane embankment	NA	9	R	T	-	-	-	-	-	
141246	Attleboro Lane, Water Orton, Birmingham	0.14	0.07/0.07	-	Marsh Lane embankment	NA	7	R	T	-	-	-	-	-	
146872	Gilson Road, Coleshill, Birmingham	0.2	0.05/0.05	-	Gilson cutting	NA	4	R	T	-	-	-	-	-	
146954	Gilson Road, Coleshill, Birmingham	0.12	0.06/0.06	-	Gilson cutting	NA	3	R	T	-	-	-	-	-	
146974	Gilson Road, Coleshill, Birmingham	0.39	0.18/0.18	-	Gilson embankment	NA	4	R	T	-	-	-	-	-	
147008	Meadowbank Drive, Coleshill, Birmingham	0.49	0.22/0.22	-	Gilson cutting	A	9	R	T	-	-	Y	10	-	CSV19-Co2

Table 2: Assessment of construction induced ground-borne vibration at non-residential receptors

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	PPV [mm/s] on foundation	Typical/highest monthly indoor VDV [m/s ^{1.75}]		Construction activity resulting in highest forecast vibration levels	Type of effect	Number of impacts	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
			Day 0700-2300	Night 2300-0700											
130843	Office, Gorsey Lane, Coleshill	0.85	0.35/0.35	-	Watton House embankment	B	5	V3	T	-	-	-	-	-	
139889	Water Orton Primary School, Vicarage Lane, Water Orton	0.11	0.03/0.03	-	Marsh Lane embankment	B	1	V3	T	-	-	-	-	-	

Airborne sound: direct impacts and effects

- 4.3.3 Activities associated with the construction phases of the Proposed Scheme would generate airborne noise. The assessment of the likely impacts and significant effects as a result of the construction noise has considered the effects on:
- residential receptors, both as individual dwellings and communities; and
 - non-residential receptors, including quiet areas.
- 4.3.4 For each type of receptor, subject to the screening distances identified, and based upon supplied plant information from engineers, the typical and highest monthly $L_{Aeq,T}$ noise levels from construction activities have been calculated at the façade of all assessment locations, which are representative of a number of receptors in the study area.
- 4.3.5 Construction noise predictions have been based on the best information available at the time of the assessment supplied by the engineers. Changes to the Proposed Scheme subsequent to the assessment may result in changes in the number and locations of identified effects. Where changes to the design have been identified, a qualitative assessment of the impacts has been undertaken.
- 4.3.6 Information regarding the number and use of all receptors has been based upon supplied information and area surveys. A worst case approach has been taken and wherever possible and the most sensitive likely receptor has been assumed.
- 4.3.7 The assessment results, impact criteria and significance criteria for the assessment of the scheme at residential and non-residential receptors are presented in Table 3 and Table 4 respectively.
- 4.3.8 Explanation of the information within Table 3 and Table 4 is provided in Volume 5: Appendix SV-001-000, with the following additional notes:

	Where the significant effect column is highlighted, then a significant effect is identified at the referenced community, or individual non-residential receptor
*	Significant effect – the quantitative impact methodology has identified either: <ol style="list-style-type: none"> 1) no impact at this receptor but further information (see assessment) has identified that a significant effect is nonetheless likely; or 2) an impact at this receptor which, based upon further qualitative receptor information, (see assessment text) does not give rise to a significant effect
~	Significant effect – the forecast adverse effects are not considered to be significant on a community basis (further information on methodology is provided in Volume 5: Appendix SV-001-000)
A	Type of effect – adverse effect
S	Type of effect – significant adverse effect
NA	Type of effect – not generally an adverse effect
B	Type of effect – for non-residential receptors further detail about the type of effect is set out in the text of Volume 5: Appendix SV-001-000
R	Type of receptor – residential
G	Type of receptor – (G1) theatres, large auditoria and concert halls, (G2) sound recording and broadcast studios, (G3) places of meeting for religious worship, courts, cinemas, lecture theatres, museums and small auditoria or halls, (G4) schools, colleges, hospitals, hotels and libraries, and (G5) offices and general commercial premises
T	Receptor design – typical
S	Receptor design – special
H	Existing environment – high existing ambient noise levels, day >75dB, evening >65dB or night >55dB L_{pAeq} at the facade
L	Existing environment – low existing ambient noise levels, day ≤45dB, evening ≤45dB or night ≤35dB L_{pAeq} at the facade
NI	Mitigation effect – identified as likely to qualify for noise insulation under the draft CoCP

Table 3: Assessment of construction noise at residential receptors

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L_{pAeq} [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise level	Type of effect	Number of impacts represented	Type of receptor	Receptor resig	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
101811	South Drive, Coleshill, Birmingham	57/63 [A]	-	-	Utilities diversion	NA	1	R	T	-	-	-	-	-	
110175	Auckland Drive, Birmingham	52/57 [B]	-	-	Demolition works	NA	19	R	T	-	-	-	-	-	
110201	Auckland Drive, Birmingham	53/58 [B]	-	-	Demolition works	NA	8	R	T	-	-	-	-	-	
110247	Red Wing Walk, Birmingham	51/56 [B]	-	-	Demolition works	NA	18	R	T	-	-	-	-	-	
123472	Gilson Drive, Coleshill, Birmingham	59/65 [B]	-	48/48 [C]	Day: Viaduct superstructure Night Viaduct superstructure	NA	4	R	T	H	-	-	-	-	
123516	Gilson Drive, Coleshill, Birmingham	61/67 [B]	-	48/48 [C]	Day: Utilities diversion Night: Viaduct Superstructure	NA	6	R	T	H	-	-	-	-	
124210	Stonebridge Road, Coleshill, Birmingham	47/54 [C]	-	-	Utilities diversion	NA	1	R	T	-	-	-	-	-	
124910	Stonebridge Road, Coleshill, Birmingham	57/62 [C]	-	-	Haul road construction	NA	1	R	T	-	-	-	-	-	
126717	Birmingham Road, Coleshill, Birmingham	65/74 [C]	-	-	Road Site clearance	NA	3	R	T	-	-	-	-	-	

Appendix SV-003-019 | Effects arising during construction

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise level	Type of effect	Number of impacts represented	Type of receptor	Receptor resgn	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
		Day 0700- 1900	Evening 1900- 2300	Night 2300- 0700											
128960	Grimstock Hill, Lichfield Road, Coleshill, Birmingham	54/59 [B]	-	-	Viaduct superstructure	NA	1	R	T	-	-	-	-	-	
129369	Gilson Road, Coleshill, Birmingham	47/55 [C]	-	-	Earthworks	NA	5	R	T	-	-	-	-	-	
136640	Birmingham Road, Water Orton, Birmingham	55/61 [C]	-	-	Retaining wall construction	NA	1	R	T	-	-	-	-	-	
136661	Birmingham Road, Water Orton, Birmingham	55/62 [C]	-	-	Retaining wall construction	NA	2	R	T	-	-	-	-	-	
137618	Alvis Walk, Birmingham	55/61 [B]	-	-	Retaining wall construction	NA	13	R	T	-	-	-	-	-	
137633	Lanchester Way, Birmingham	57/63 [B]	-	-	Retaining wall construction	NA	26	R	T	-	-	-	-	-	
137672	Lanchester Way, Birmingham	59/65 [C]	-	-	Retaining wall construction	NA	25	R	T	-	-	-	-	-	
137690	Rover Drive, Castle Bromwich	56/64 [B]	-	-	Retaining wall construction	NA	22	R	T	-	-	-	-	-	
138204	Cowley Close, Birmingham	55/62 [B]	-	-	Retaining wall construction	NA	56	R	T	-	-	-	-	-	
138225	Elva Croft, Birmingham	57/64 [B]	-	-	Retaining wall construction	NA	18	R	T	-	-	-	-	-	
138301	Lanchester Way, Birmingham	60/66 [C]	-	-	Retaining wall construction	NA	18	R	T	-	-	-	-	-	
138363	Humber Grove, Birmingham	59/65 [C]	-	-	Retaining wall construction	NA	16	R	T	-	-	-	-	-	
138398	Rover Drive, Birmingham	55/61 [B]	-	-	Retaining wall construction	NA	34	R	T	-	-	-	-	-	
138437	Triumph Walk, Birmingham	50/56 [B]	-	-	Retaining wall construction	NA	34	R	T	-	-	-	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise level	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
139772	Vicarage Lane, Water Orton, Birmingham	56/61 [B]	-	-	Earthworks	NA	6	R	T	-	-	-	-	-	
139831	Vicarage Lane, Water Orton, Birmingham	56/62 [B]	-	-	Earthworks	NA	8	R	T	-	-	-	-	-	
139889	Vicarage Lane, Water Orton, Birmingham	48/53 [A]	-	-	Earthworks	NA	9	R	T	-	-	-	-	-	
139929	Attleboro Lane, Water Orton, Birmingham	55/61 [A]	-	-	Demolition works	NA	9	R	T	-	-	-	-	-	
140067	Vicarage Lane, Water Orton, Birmingham	55/60 [A]	-	-	Demolition works	NA	29	R	T	-	-	-	-	-	
140180	Vicarage Lane, Water Orton, Birmingham	55/60 [A]	-	-	Earthworks	NA	20	R	T	-	-	-	-	-	
140403	Vicarage Lane, Water Orton, Birmingham	52/57 [A]	-	-	Earthworks	NA	26	R	T	-	-	-	-	-	
140636	Plank Lane, Water Orton, Birmingham	52/58 [A]	-	-	Road construction	NA	7	R	T	-	-	-	-	-	
141182	St. Blaise Avenue, Water Orton, Birmingham	50/55 [A]	-	-	Demolition works	NA	20	R	T	-	-	-	-	-	
141246	Attleboro Lane, Water Orton, Birmingham	63/70 [A]	-	-	Road construction	A	7	R	T	-	-	-	12	-	CSV19-Co1

Appendix SV-003-019 | Effects arising during construction

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise level	Type of effect	Number of impacts represented	Type of receptor	Receptor resgn	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
141274	Birmingham Road, Water Orton, Birmingham	54/60 [C]	-	-	Retaining wall construction	NA	14	R	T	-	-	-	-	-	
141408	Rover Drive, Birmingham	57/63 [C]	-	-	Bridge superstructure	NA	21	R	T	-	-	-	-	-	
141456	Triumph Walk, Birmingham	52/58 [C]	-	-	Bridge superstructure	NA	43	R	T	-	-	-	-	-	
141697	Wolseley Close, Birmingham	53/59 [A]	-	-	Retaining wall construction	NA	46	R	T	-	-	-	-	-	
141762	Lanchester Way, Birmingham	56/61 [C]	-	-	Bridge superstructure	NA	57	R	T	-	-	-	-	-	
142052	Lanchester Way, Birmingham	54/59 [B]	-	-	Demolition works	NA	45	R	T	-	-	-	-	-	
142117	Attleboro Lane, Water Orton, Birmingham	59/64 [B]	-	-	Earthworks	NA	3	R	T	-	-	-	-	-	
146143	Openfield Croft, Water Orton, Birmingham	51/56 [C]	-	-	Earthworks	NA	12	R	T	-	-	-	-	-	
146211	Coleshill Road, Water Orton, Birmingham	49/54 [C]	-	-	Earthworks	NA	23	R	T	-	-	-	-	-	
146284	St. Blaise Avenue, Water Orton, Birmingham	52/57 [A]	-	-	Balancing pond Earthworks	NA	18	R	T	-	-	-	-	-	
146312	St. Blaise Avenue, Water Orton, Birmingham	51/57 [A]	-	-	Balancing pond Earthworks	NA	13	R	T	-	-	-	-	-	
146361	Vicarage Lane, Water Orton, Birmingham	51/56 [A]	-	-	Balancing pond Earthworks	NA	21	R	T	-	-	-	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L_{pAeq} [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise level	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
146424	Coleshill Road, Water Orton, Birmingham	51/56 [B]	-	-	Balancing pond Earthworks	NA	10	R	T	-	-	-	-	-	
146469	Coleshill Road, Water Orton, Birmingham	51/57 [A]	-	-	Earthworks	NA	10	R	T	-	-	-	-	-	
146557	Watton Lane, Water Orton, Birmingham	48/54 [B]	-	-	Demolition works	NA	14	R	T	-	-	-	-	-	
146620	Watton Lane, Water Orton, Birmingham	53/60 [C]	-	-	Viaduct superstructure	NA	11	R	T	-	-	-	-	-	
146638	Watton Lane, Water Orton, Birmingham	53/59 [C]	-	44/48 [C]	Day: Earthworks Night: Viaduct Superstructure	NA	4	R	T	H	-	-	-	-	
146728	Coleshill Road, Water Orton, Birmingham	54/60 [A]	-	39/43 [C]	Day: Earthworks Night: Viaduct Superstructure	NA	16	R	T	-	-	-	-	-	
146783	Watton Lane, Water Orton, Birmingham	53/59 [A]	-	-	Earthworks	NA	23	R	T	-	-	-	-	-	
146840	Gilson Road, Coleshill, Birmingham	54/61 [C]	-	-	Earthworks	NA	4	R	T	-	-	-	-	-	
146872	Gilson Road, Coleshill, Birmingham	59/69 [B]	-	-	Footpath construction	NA	4	R	T	-	-	-	-	-	
146917	Gilson Road, Coleshill, Birmingham	60/66 [C]	-	-	PRoW superstructure	NA	5	R	T	-	-	-	-	-	

Appendix SV-003-019 | Effects arising during construction

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise level	Type of effect	Number of impacts represented	Type of receptor	Receptor resgn	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
		Day 0700- 1900	Evening 1900- 2300	Night 2300- 0700											
146954	Gilson Road, Coleshill, Birmingham	61/68 [B]	-	-	PRoW superstructure	NA	3	R	T	-	-	-	-	-	
146974	Gilson Road, Coleshill, Birmingham	64/73 [B]	-	-	Retaining wall construction	A	4	R	T	-	-	-	4	-	CSV19-Co2
147008	Meadowbank Drive, Coleshill, Birmingham	65/75 [B]	-	-	Earthworks	A	9	R	T	-	-	Y	7	-	CSV19-Co2
147038	New Road, Water Orton, Birmingham	47/51 [C]	-	-	Earthworks	NA	10	R	T	-	-	-	-	-	
147318	George Road, Water Orton, Birmingham	54/58 [C]	-	-	Utilities diversion	NA	10	R	T	-	-	-	-	-	
147332	Maud Road, Water Orton, Birmingham	51/56 [C]	-	-	Utilities diversion	NA	6	R	T	-	-	-	-	-	
147380	Maud Road, Water Orton, Birmingham	53/59 [B]	-	-	Utilities diversion	NA	6	R	T	-	-	-	-	-	
147389	George Road, Water Orton, Birmingham	49/54 [A]	-	-	Demolition works	NA	10	R	T	-	-	-	-	-	
147442	George Road, Water Orton, Birmingham	48/53 [A]	-	-	Demolition works	NA	19	R	T	-	-	-	-	-	
147501	Maud Road, Water Orton, Birmingham	52/57 [A]	-	-	Demolition works	NA	21	R	T	-	-	-	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise level	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
		Day 0700- 1900	Evening 1900- 2300	Night 2300- 0700											
147577	George Road, Water Orton, Birmingham	49/54 [A]	-	-	Demolition works	NA	55	R	T	-	-	-	-	-	
147659	Maud Road, Water Orton, Birmingham	53/59 [B]	-	-	Demolition works	NA	10	R	T	-	-	-	-	-	
147698	Watton Lane, Water Orton, Birmingham	50/57 [A]	-	-	Viaduct superstructure	NA	20	R	T	-	-	-	-	-	
147739	Park Grove, Water Orton, Birmingham	48/54 [A]	-	-	Demolition works	NA	16	R	T	-	-	-	-	-	
148027	Overton Drive, Water Orton, Birmingham	47/52 [A]	-	-	Demolition works	NA	30	R	T	-	-	-	-	-	
149230	Gilson Road, Coleshill, Birmingham	58/64 [C]	-	-	Road construction	NA	1	R	T	-	-	-	-	-	
149268	Grimstock Hill, Lichfield Road, Coleshill, Birmingham	54/59 [C]	-	-	Road construction	NA	8	R	T	-	-	-	-	-	
150059	Trajan Hill, Coleshill, Birmingham	48/53 [A]	-	-	Balancing pond Earthworks	NA	22	R	T	-	-	-	-	-	
150077	Lichfield Road, Coleshill, Birmingham	52/56 [A]	-	-	PRoW superstructure	NA	15	R	T	-	-	-	-	-	
150225	Temple Way, Coleshill, Birmingham	49/54 [C]	-	-	Earthworks	NA	21	R	T	-	-	-	-	-	
150270	Brutus Drive, Coleshill, Birmingham	50/57 [C]	-	-	Earthworks	NA	42	R	T	-	-	-	-	-	
151656	Roman Way, Coleshill, Birmingham	50/56 [C]	-	-	Demolition works	NA	2	R	T	-	-	-	-	-	

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Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise level	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
151974	Chattle Hill, Coleshill, Birmingham	54/61 [A]	-	-	Earthworks	NA	9	R	T	-	-	-	-	-	
152014	Chattle Hill, Coleshill, Birmingham	56/64 [A]	-	-	Earthworks	NA	12	R	T	-	-	-	-	-	
152035	Gorsey Way, Coleshill, Birmingham	58/65 [A]	-	-	Viaduct superstructure	NA	6	R	T	-	-	-	-	-	
152426	Imperial Rise, Coleshill, Birmingham	53/59 [C]	-	-	Earthworks	NA	22	R	T	-	-	-	-	-	
152447	Imperial Rise, Coleshill, Birmingham	51/59 [A]	-	-	Earthworks	NA	49	R	T	-	-	-	-	-	
152464	Chattle Hill, Coleshill, Birmingham	55/61 [A]	-	-	Demolition works	NA	6	R	T	-	-	-	-	-	
183917	Stonebridge Road, Coleshill, Birmingham	47/54 [C]	-	-	Utilities diversion	NA	1	R	T	-	-	-	-	-	
701084	South Drive, Coleshill, Birmingham	59/65 [A]	-	-	Utilities diversion	NA	1	R	T	-	-	-	-	-	
701085	South Drive, Coleshill, Birmingham	55/59 [A]	-	-	Earthworks	NA	2	R	T	-	-	-	-	-	
721005	Gilson Road, Coleshill, Birmingham	63/66 [C]	-	-	Road construction	NA	1	R	T	-	-	-	-	-	
721006	Gilson Road, Coleshill, Birmingham	58/64 [C]	-	-	Road construction	NA	1	R	T	-	-	-	-	-	

Table 4: Assessment of construction noise at non-residential receptors

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L_{pAeq} [dB] at the facade			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor resig	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
100887	Woodlands Cemetery and Crematorium, Birmingham Road	51/56	-	-	Demolition works	B	1	G3	T	-	-	-	-	-	
101811	Coleshill Manor Office Campus, South Drive	56/63	-	-	Utilities diversion	B	5	G5	T	-	-	-	-	-	
103082	High Meadow Infant School, Norton Road	54/58	-	-	Viaduct superstructure	B	1	G4	T	-	-	-	-	-	
121071	Office, Clopton Crescent	48/51	-	-	Demolition works	B	3	G5	T	-	-	-	-	-	
124229	Office, Stonebridge Road	62/67	-	-	Utilities diversion	B	1	G5	T	H	-	-	-	-	
125027	Fire Station, Birmingham Road	49/54	-	-	Retaining wall construction	B	2	G4	T	-	-	-	-	-	
125076	British Legion Club, High Street	49/55	-	-	Viaduct superstructure	B	1	G5	T	-	-	-	-	-	
125248	Police Services, Birmingham Road	53/59	-	-	Retaining wall construction	B	1	G4	T	-	-	-	-	-	
125255	General Commercial, Parkfield Road	50/56	-	-	Retaining wall construction	B	3	G5	T	-	-	-	-	-	
125488	Community Centre, Digby Road	50/55	-	-	Demolition works	B	1	G3	T	-	-	-	-	-	
125685	Coleshill C of E Primary School, Wingfield Road	45/49	-	-	Demolition works	B	1	G4	T	-	-	-	-	-	
125722	Community Centre, Wall Avenue	45/48	-	-	Road Site clearance	B	1	G3	T	-	-	-	-	-	
127026	Local Government Office, Parkfield Road	46/52	-	-	Retaining wall	B	1	G5	T	-	-	-	-	-	

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Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] at the facade			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
					construction										
127102	General Commercial, High Street	45/51	-	-	Earthworks	B	4	G5	T	-	-	-	-	-	
127465	General Commercial, Ravenswood Hill	46/50	-	-	Viaduct superstructure	B	1	G5	T	-	-	-	-	-	
128147	Engineering Works, Chestnut Grove	44/48	-	-	Viaduct superstructure	B	1	G5	T	-	-	-	-	-	
128186	Employment Agency, High Street	48/53	-	-	Viaduct superstructure	B	3	G5	T	-	-	-	-	-	
128828	Shopping, Lichfield Road	49/53	-	-	Viaduct superstructure	B	1	G5	T	-	-	-	-	-	
129852	General Commercial, High Street	43/48	-	-	Demolition works	B	15	G5	T	-	-	-	-	-	
130518	General Commercial, Gorsey Lane	46/52	-	-	Demolition works	B	7	G5	T	-	-	-	-	-	
130843	General Commercial, Coleshill Industrial Estate, Gorsey Lane	73/81	-	-	Earthworks	B	5	G5	T	-	-	-	10	-	CSV19-No1
130991	General Commercial, Coleshill Industrial Estate, Gorsey Lane	56/60	-	-	Utilities diversion	B	8	G5	T	-	-	-	-	-	
131458	General Commercial, Station Road	46/52	-	-	Demolition works	B	37	G5	T	-	-	-	-	-	
131741	Community Centre, Temple Way	44/48	-	-	Retaining wall construction	B	2	G3	T	-	-	-	-	-	
132786	General Commercial, Lichfield Road	62/67	-	-	Utilities diversion	B	3	G5	T	-	-	-	-	-	
138485	Hall, Sunbeam Close	50/53	-	-	Retaining wall	B	2	G3	T	-	-	-	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] at the facade			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
					construction										
139889	Water Orton Primary School, Attleboro Lane	51/56	-	-	Earthworks	B	1	G4	T	-	-	-	15	-	*
146143	Mental Health Centre, Coleshill Road	51/56	-	-	Earthworks	B	1	G4	T	-	-	-	-	-	
147174	General Commercial, Marsh Lane	50/54	-	-	Viaduct superstructure	B	1	G5	T	-	-	-	-	-	
147501	Community Centre, Maud Road	52/57	-	-	Demolition works	B	1	G3	T	-	-	-	-	-	
148102	General Commercial, Marsh Lane	49/54	-	-	Demolition works	B	1	G5	T	-	-	-	-	-	
149230	Grimstock Country House Hotel, Gilson Road	58/64	-	-	Road construction	B	1	G4	T	-	-	-	-	-	
149268	Shopping, Lichfield Road	54/59	-	-	Road construction	B	1	G5	T	-	-	-	-	-	
149951	General Commercial, Norton Road	46/51	-	-	Retaining wall construction	B	1	G5	T	-	-	-	-	-	
150225	General Commercial, Lichfield Road	49/54	-	-	Earthworks	B	1	G5	T	-	-	-	-	-	
151087	General Commercial, Station Road	44/48	-	-	Demolition works	B	19	G5	T	-	-	-	-	-	
151656	General Commercial, Roman Way	50/56	-	-	Demolition works	B	31	G5	T	-	-	-	-	-	
151756	General Commercial, Roman Way	47/53	-	-	Earthworks	B	12	G5	T	-	-	-	-	-	
151902	Engineering Works, Roman Way	53/59	-	-	Demolition works	B	6	G5	T	-	-	-	-	-	
154000	General Commercial, Station Road	43/48	-	-	Demolition works	B	18	G5	T	-	-	-	-	-	

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Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor L _{pAeq} [dB] at the facade			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [m]	Mitigation effect	
		Day 0700- 1900	Evening 1900- 2300	Night 2300- 0700											
154074	General Commercial, Temple Way	45/48	-	-	PRoW superstructure	B	10	G5	T	-	-	-	-	-	
185489	Office, Coventry Road	46/51	-	-	Demolition works	B	1	G5	T	-	-	-	-	-	
187808	Office, Station Road	43/48	-	-	Retaining wall construction	B	11	G5	T	-	-	-	-	-	
700641	Woodlands School, Packington Lane	45/48	-	-	Haul road construction	B	1	G4	T	-	-	-	-	-	
701084	Retail Warehouse, South Drive	58/64	-	-	Utilities diversion	B	1	G5	T	-	-	-	-	-	
701085	Office, South Drive	55/60	-	-	Earthworks	B	4	G5	T	-	-	-	-	-	
701086	General Commercial, Coventry Road	44/48	-	-	Demolition works	B	1	G5	T	-	-	-	-	-	
701089	Clinic, Wingfield Road	46/51	-	-	Demolition works	B	2	G4	T	-	-	-	-	-	
710921	The Wheatsheaf, Station Road	49/53	-	-	Viaduct superstructure	B	1	G5	T	-	-	-	-	-	

Airborne sound: indirect effects

- 4.3.9 Construction road traffic associated with the construction phases of the Proposed Scheme would generate airborne noise. Based upon traffic information for the Proposed Scheme, the change in traffic noise level at a reference distance of 10m from the edge of the nearside carriageway resulting from the presence of construction traffic, for a given road, has been predicted. The results for potentially significant road links are presented in Table 5.
- 4.3.10 Explanation of the information within Table 5 is provided in Volume 5: Appendix SV-001-000, with the following additional notes:

Where the significant effect column is highlighted, then a significant effect is identified on nearby communities or individual receptors

Change values

Yellow denotes a minor impact – a change is of 3-5dB or 1-3dB where a high existing sound level is identified
 Orange denotes a moderate impact – a change is of 5-10dB or 3-5dB where a high existing sound level is identified
 Red denotes a major impact – a change is of >10dB or >5dB where a high existing sound level is identified

Table 5: Assessment of construction traffic noise levels

Road name	Link	Future baseline sound level (dB)	Future baseline sound level + construction traffic (dB)	Change (dB)	Significant effect
		Daytime L _{pAeq,16hr} 0700-23:00 free-field	Daytime L _{pAeq,16hr} 0700-23:00 free-field		
Coleshill Heath Road	Stonebridge Road to the Coleshill Heath Road underbridge compound	71.2	72.8	+1.6	
A446 Stonebridge Road	Coleshill Heath Road to A4114 Birmingham Road	74.0	75.4	+1.4	
B4114 Birmingham Road	Stonebridge Road to Manor Drive	71.9	75.1	+3.3	
B4114 Birmingham Road	Manor Drive to Roadhead RH-161	70.5	74.0	+3.5	
A446 Stonebridge Road	B4114 Birmingham Road to B4117 Gilson Road	73.9	75.7	+1.9	
B4117 Gilson Road	A446 Lichfield Road to B4117 Gilson Drive	64.0	64.9	+0.8	
Gilson Drive	B4117 Gilson Road to the M42 Coleshill box structure compound	45.3	51.9	+6.5	CSV19-C03
A446 Litchfield Road	B4117 Watton Lane to Gilson Road	72.2	74.3	+2.1	
A446 Lichfield Road	Hams Hall Roundabout to B4117 Watton Lane	73.0	75.2	+2.3	
B4117 Watton Lane	A446 Lichfield Road to the Water Orton Viaducts No. 1 & 3 compound	65.2	66.3	+1.1	

4.4 Assessment of significant effects

Residential receptors: direct effects – individual dwellings

- 4.4.1 Taking account of the avoidance and mitigation measures set out in Volume 2: Report 19, no residential buildings are forecast to experience noise levels higher than the noise insulation trigger levels as defined in the draft CoCP. For daytime construction the trigger level is an equivalent continuous noise level of 75dB² measured outdoors.
- 4.4.2 The mitigation measures, including noise insulation, will reduce noise inside all dwellings, such that it does not reach a level where it would significantly affect residents¹.

Residential receptors: direct effects –communities

- 4.4.3 The avoidance and mitigation measures in this area will avoid airborne construction noise adverse effects¹ on the majority of receptors and communities. Residual temporary noise or vibration effects are identified later in this section.
- 4.4.4 It is anticipated that there may be some night-time working during road and rail possession periods. Night-time construction activities in this area would be restricted to where the route crosses existing railway lines, roads or where newly constructed roads tie into the existing road network for reasons of safety, engineering practicability or to reduce the impact on existing transport. These works are likely to be of short duration, and be limited in the types of activities being undertaken. As a consequence, it is expected that the noise effects from night time activities would be limited in duration and hence would not be considered significant.
- 4.4.5 With regard to noise outside dwellings, the assessment of temporary effects takes account of construction noise relative to existing sound levels.
- 4.4.6 In locations with lower existing sound levels³, construction noise effects¹ are likely to be caused by changes to noise levels outside dwellings. These may be considered by the local community as an effect on the acoustic character of the area and hence be perceived as a change in the quality of life. These effects are considered to be significant when assessed on a community basis taking account of the local context³.
- 4.4.7 The direct adverse construction noise effects¹ on the areas of the residential communities identified in Table 6 are considered to be significant.
- 4.4.8 Table 6 presents a summary of the likely residual effects on residential communities. The typical and worst case noise levels are reported to the nearest 5dB. The number of dwellings in each community has also been rounded to the nearest 5-10 properties.

² L_{pAeq,0800-1800} measured at the facade.

³ Further information is provided in Volume 5: Appendix SV-001-000.

Table 6: Construction noise and vibration adverse effects that are considered significant on communities and shared open areas

Significant effect number	Type of significant effect	Time of day	Location	Cause (construction activities)	Assumed duration of impact
CSV19-Co1	Construction noise	Day	Approximately 7 dwellings on Attleboro Lane, Water Orton	Attleboro Lane overbridge with typical and highest monthly noise levels of 65dB and 70dB ⁴	12 months
CSV19-Co2	Combined construction noise and ground-borne vibration	Day	Approximately 13 dwellings on Gilson Road and Meadowbank Drive, Gilson	Gilson Cutting and Gilson embankment with typical and highest monthly noise levels of 65dB and 75dB ⁴ and typical and highest monthly vibration levels of 0.22m/s ^{1.75}	10 months and 7 months

Residential receptors: indirect effects

- 4.4.9 Construction traffic is likely to cause adverse noise effects on approximately 10 dwellings on Gilson Drive located immediately adjacent to the road (CSV19-Co3). Properties are forecast to experience an increase in outdoor noise levels of 6.5dB during the peak months (further information is provided in Section 12 of Volume 2: Traffic and Transport).
- 4.4.10 This adverse effect¹ would be a change in the acoustic character of the area such that there is a perceived change in the quality of life and is considered significant when assessed on a community basis taking account of the local context³.
- 4.4.11 A minor impact, due to construction traffic, is predicted along Coleshill Heath Road, the A446 Stonebridge Road, the A446 Lichfield Road and the B4117 Watton Lane; a moderate impact is predicted along B4114 Birmingham Road. Taking account of incorporated mitigation, the limited number of properties adjacent to these roads and the predicted change in traffic noise levels, no indirect construction noise significant effects have been identified.
- 4.4.12 In certain instances a qualitative assessment has been undertaken. This was the case for assessment of noise due to construction traffic along the B4118 Birmingham Road, the B4117 New Road and the B4117 Watton Lane.
- 4.4.13 It is anticipated that the majority of construction traffic travelling along the B4117 Watton Lane from the A446 Lichfield Road will access the Water Orton viaducts No. 1 & 3 located on the eastern edge of Water Orton and that only a small proportion will continue along the B4117 Watton Lane, the B4117 New Road and the B4118 Birmingham Road to access the B4118 Water Orton Road overbridge compound located on the western edge of Water Orton. Along the B4117 Watton Lane to the Gypsy Lane junction a +1.1dB change has been predicted. It has therefore been assumed that the change in noise levels due to construction traffic travelling to the B4118 Water Orton Road overbridge compound would be less and hence no significant temporary noise effect is considered likely.

⁴ Equivalent continuous sound level at the facade, L_{pAeq, 0700-1900}.

Non-residential receptors: direct effects

4.4.14 Significant construction noise effects have been identified on a worst case basis on the following non-residential receptor, the typical and worst case noise levels are reported to the nearest 5dB:

- Commercial properties located on the western edge of the Coleshill Industrial Estate (CSV19-No1). A significant noise effect has been identified on a reasonably foreseeable worst case basis during the daytime at Highway Point, a large industrial premises belonging to International Automotive Components (IAC), which incorporates both manufacturing facilities and office space. The office space is located on the south eastern facade of the building, furthest from the construction works. A significant effect has also been identified, on a reasonably foreseeable worst case basis, on Bromwich Court. This is an office block complex providing predominantly open plan office accommodation in a three storey brick built building with a pitched tiled roof. A significant daytime effect is predicted on the offices in both commercial premises over a period of 16 months commencing in 2020, reaching a maximum of 80dB⁴, due to a range of construction activities including ground and structural engineering works associated with Chattle Hill viaduct, the Water Orton rail underbridge and the Watton House embankment which extends almost to the boundary of the IAC industrial premises.

4.4.15 An exceedance of the daytime construction noise impact criteria has been identified at Water Orton Primary School, represented by assessment locations 139889. Located on the western edge of Water Orton, the school caters for children between 4 and 12 years of age and is home to one of Warwickshire's three dyslexia centres. There is also a combined pre-school and out of hours childcare facility (for children aged between 2-11 years of age) operated from buildings in the grounds that are leased from Water Orton Primary School, which is called The Tree House of Water Orton. The school site incorporates a mix of single-story buildings with flat roofs, a hall, and a double-story brick built building with a pitched tiled roof. The school also has outdoor space including a large playing field and three hard play surfaces. All buildings have windows with openable casements and it is assumed that ventilation is provided by the opening of windows. Noise levels, at the building facade closest to the construction activities, exceed the daytime criteria by 1dB for a total of 15 months commencing in 2018, due to a range of construction activities including ground and structural engineering works associated with the Attleboro flyover, the Marsh Lane embankment and a nearby utility diversion. All reasonably practicable measures to further reduce or avoid a significant effect during construction will be undertaken. To this end, it is anticipated that construction activities would be staggered such that the Marsh Lane embankment is constructed first to provide increased acoustic screening, reducing the combined effect of noise from the construction activities of the flyover and utility diversion avoiding any significant effect on the school. On this basis no significant effect is identified at Water Orton Primary School.

Non-residential receptors: indirect effects

4.4.16 Significant noise effects on non-residential receptors arising from construction traffic are unlikely to occur in this area.

Cumulative effects from the Proposed Scheme and other committed development

- 4.4.17 This assessment has considered the potential cumulative construction noise effects of the proposed scheme and other committed developments⁵. In this area, there is no committed development that would be built at the same time as the Proposed Scheme and accordingly, construction noise or vibration from the Proposed Scheme is unlikely to result in any significant cumulative noise effects.

⁵ Refer to Volume 5: Appendix CT-004-000.